higher risk of relapse, lower quality of life and higher medical costs. The adherence measure, persistency, refers to the duration a patient continues with therapy. This study aims to evaluate the non-pharmacy medical costs associated with the persistency of DMT's in patients with MS. **METHODS:** A decision-analytic model was designed using persistency rates, health care resource use and costs from the published literature. The model evaluated the medical costs associated with the persistence, switching, and discontinuation rates of patients on interferon β1a *IM*, interferon β1b *SC*, and interferon β1a *SC* over a 2-year time horizon. Using 6-month intervals in the model, patients could switch to a comparator treatment, discontinue treatment, or persist/remain on their current treatment, and would incur the non-pharmacy medical costs associated with each. For patients who switched treatments, the model assumed an equal probability of switching to the three remaining DMTs. The model also assumed that patients who discontinued therapy would initiate on a different therapy after one month of discontinuing. The overall medical costs related to persisting on treatment, switching treatment or discontinuing treatment were calculated for all treatment arms. **RESULTS:** Based on the results from the model, an annual per-patient medical cost of $7423 was observed for interferon β1a *IM* patients, showing a medical cost advantage over patients on interferon β1b *SC* ($8144; 8.9%), and interferon β1a *SC* ($7552; 1.7%). **CONCLUSIONS:** MS is a lifelong disease that requires continuous treatment. The results of this model show that interferon β1a *IM* is a cost-saving treatment for the medical costs associated with MS patients on disease modifying therapies.

PND8

THE POTENTIAL COST IMPACT OF USING A PEG HYDROGEL SEALANT COMPARED WITH FIBRIN SEALANT TO PREVENT CEREBRAL SPINAL FLUID LEAKS AFTER CRANIAL SURGERY IN THE UK

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OBJECTIVES: Cerebrospinal fluid (CSF) leak is an unavoidable consequence of cranial surgery with leak rates between 0% to 25% and resulting costs ranging from £9,000 to £36,000. The use of polyethylene glycol (PEG) hydrogel dural sealant as an adjunct to sutured closure has been shown to reduce CSF leak rates as compared with sutures alone in cranial procedures (GR Cosgrove *et al*, 2007). Our hypothetical analysis applied the potential cost offsets of using PEG hydrogel sealant as an adjunct to sutured closure in 200 cranial procedures assuming CSF leak rates of 4.5% (9/200) (GR Cosgrove *et al*, 2007), compared with 10% (20/200) for fibrin sealant (JA Grotenhuis, 2005). **METHODS:** The incremental additional cost for treating CSF leaks using total patient costs for those with CSF leaks (£25,253) compared to those without CSF leaks (£10,497) was estimated at £14,756 in a Dutch study (JA Grotenhuis, 2005). We applied this CSF leak cost to estimate potential UK hospital cost offsets on 200 hypothetical cranial patients using PEG hydrogel sealant (£300/treatment), compared with fibrin sealant (£133/treatment) on all 200 patients. **RESULTS:** Use of a PEG hydrogel sealant compared with fibrin sealant could potentially save £137,611 (or £688/patient) for a hospital that performed 200 cranial surgery procedures using a PEG hydrogel sealant compared with using fibrin sealant on all 200 procedures. **CONCLUSIONS:** This study demonstrates the potential economic advantages of using a PEG hydrogel sealant in cranial procedures. Future clinical direct comparative studies would be beneficial to confirm these findings and understand the possible economic advantages for other types of dural surgeries.

PND9

ASSESSMENT OF DISEASE BURDEN ASSOCIATED WITH EPILEPSY IN HUNGARY, BASED ON A CROSS-SECTIONAL QUESTIONNAIRE SURVEY OF 100 PATIENTS

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OBJECTIVES: Epilepsy is the second most frequent neurological disease among adults; approximately 50–60 thousand people suffer from epilepsy in Hungary. With our survey we aimed to assess the cost of illness from a societal viewpoint as well as the quality of life associated with epilepsy in Hungary. **METHODS:** We conducted a cross-sectional questionnaire survey of 100 consecutive patients in 2 epilepsy centres in Hungary in collaboration with epilepsy specialists. The self-developed questionnaire consisted of general and disease-specific parts to determine costs associated with epilepsy. Questions related to basic demographic characteristics, disease progression and health and social services used in the past 12 months, disease-associated non-medical services, as well as the productivity losses of epilepsy. Two generic quality of life questionnaires, EQ-5D and SF-36 were also used. **RESULTS:** A total number of 100 patients were assessed (60% female). The average age was 36.7 years (SD. 12.5), average disease duration was 15 years (SD. 12). Quality of life calculations resulted in mean of 0.83 (SD. 0.24) in EQ-5D, 74 (SD. 16) in VAS scale and 72.3 (SD. 20.2) in SF-36. Cost-of-illness calculations were carried out and direct (15%) and indirect costs (85%) were determined. The annual total cost of epilepsy per capita was estimated to be a mean of €5179 (SD. €10,822) with the human resource method, while €2,552/capita/year (SD. 8659) by the friction cost method. **CONCLUSIONS:** Comparing the 100 patients' data with data from previous EQ-5D based population-sample survey shows that quality of life among people with epilepsy was lower than among the average Hungarian population. We found significant correlation (at $P < 0.05$) among all of the quality of life results and the yearly total costs (calculating both with human capital and friction cost methods).

PND10

LONG-TERM DISABILIY COST IN TUBEROUS SCLEROSIS COMPLEX (TSC) IN BRAZIL

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OBJECTIVES: To estimate long-term disability costs associated with tuberous sclerosis complex, a rare multisystem genetic disease, in Brazil. **METHODS:** Literature review for TSC long-term disability and economic burden was performed (Pubmed, LILACS, SciELO, CRDs). Cost estimation was limited to epilepsy (most prevalent TSC disorder). Cost of lost productivity in patients since epilepsy onset in childhood and carried in adulthood as well as caregivers' productivity costs were estimated. The Human Capital Method was adopted and potential lost working years estimated till an active age of 65 years. It was assumed a caregiver for all ages. Average income, unemployment rate due to epilepsy, productivity growth and epidemiology data were obtained from the literature and from the Brazilian Institute of Geography and Statistics. Mean annual productivity cost per patient, total productivity cost per patient and the total productivity burden of TSC-related epilepsy were calculated. Costs were estimated in 2008 Reals and discounted at 5%. Univariate sensitivity analysis was conducted for epidemiology data, employment status rate, productivity growth, discount rate and time horizon. **RESULTS:** Productivity loss was 47, 30 and 65 years for epilepsy onset in childhood and adulthood and caregivers, respectively. The discounted and not discounted mean annual productivity cost per patient were R$1,970 and R$11,323, total productivity cost per patient R$97,882 and R$691,150 and total productivity burden of TSC-related epilepsy in Brazil R$1,568,965,961 and R$11,078,536,271, respectively (1Euro = 3.24Reals). Results were sensitive to all the parameters varied in the sensitivity analysis, especially discount rate. **CONCLUSIONS:** TSC-related epilepsy is a chronic disorder associated with loss of productivity with a significant economic burden in Brazil. Although significant, the economic burden related to productivity loss is expected to be even higher since there are still costs deriving from absenteeism of patients and caregivers when employed looking for health services to be included in further analysis.

PND11

NURSE COSTING SURVEY FOR THE MANAGEMENT OF ADVERSE EVENTS IN PATIENTS WITH MULTIPLE SCLEROSIS TREATED WITH DISEASE-MODIFYING DRUGS IN THE UK

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OBJECTIVES: To determine the costs and medical resource use for the management of injection-site reactions (ISRs) and flu-like symptoms (FLS) associated with injectable disease-modifying drugs (DMDs) used to treat patients with relapsing–remitting multiple sclerosis (RRMS) in the UK. **METHODS:** A survey was carried out amongst NHS nurses to understand the management of adverse events occurring with injectable DMD use. Data were collected via a postal questionnaire. Responses were compiled for the frequency and duration of side-effects, support received and medical consultations required for adverse event management. The unit costs were derived from the Personal Social Services Research Unit, the Office for National Statistics and the British National Formulary. Once all parameters and unit prices were characterised with conservative approaches for missing data (e.g. no GP consultation mandatory before antibiotics prescription), computations were processed to determine means and standard deviations (SDs). **RESULTS:** In total, 19 NHS nurses managing significant numbers of patients with MS for different primary care trusts participated in the costing survey. On average, the nurses reported that patients experienced 27 ISRs per year of those 33% experienced ISRs only at treatment start while 21% experienced ISRs continuously during the year. Seventy-four percent experienced FLS only at treatment start and 11% continuously. The average cost for the management of ISRs per year was £187 (SD £209) equivalent to an average cost of £7 per event. The average cost for the management of FLS per year was £166 (SD £144) equivalent to an average cost of £6 per event. **CONCLUSIONS:** This is the first UK study to provide data on the costs associated with management of ISRs and FLS occurring with injectable DMDs. These data, alongside prevalence estimates, enabled us to calculate the costs of managing adverse events associated within DMDs in an economic model.

PND12

EUROPEAN-HUNTINGTON'S DISEASE BURDEN STUDY (EURO-HDB)—PRELIMINARY RESULTS FOR ITALY AND FRANCE

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OBJECTIVES: Huntington's disease (HD) is a rare neurodegenerative disease leading to sustained disability and poor health-related quality of life (HRQOL). As new treatments are in development for HD, data on the burden of disease are required. This study evaluated patient health status, patient and caregiver HRQoL and costs in HD. **METHODS:** Euro-HDB is a European cross-sectional survey being conducted in eight European countries. Self-reported questionnaires were completed by patients and caregivers. The patient questionnaire includes the Huntington Self-Assessment Instrument, a specific tool that assesses clinical characteristics, HRQoL and health care resource utilization. The EQ5D questionnaire and the SF36 Survey are also included. **RESULTS:** To date, 201 patients have been enrolled in France and 124 in Italy. All levels of disease severity are represented. Average annual costs from societal